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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/072,317	02/06/2002	Eyal Aronoff	QSOFT.103A	9700

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KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
FOURTEENTH FLOOR
IRVINE, CA 92614

EXAMINER

AILES, BENJAMIN A

ART UNIT	PAPER NUMBER
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2142

DATE MAILED: 06/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/072,317

Applicant(s)

ARONOFF ET AL.

Examiner

Benjamin A. Ailes

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5-16,20,21 and 24-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5-16,20,21 and 24-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/7/2006.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1, 5-16, 20, 21 and 24-27 remain pending.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07 April 2006 has been entered.

Response to Arguments

3. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 5-16, 20, 21 and 24-27 rejected under 35 U.S.C. 102(e) as being anticipated by Song (US 6,421,688 B1).

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6. Regarding claim 1, Song discloses a database cluster which avoids client failure by connecting to multiple nodes of the cluster, the database cluster comprising:

a first computing system including:

a primary connection manager which forms a client TCP/IP connection with and receives transactions from at least one client (col. 3, ll. 60-63 and col. 5, ll. 12-30), and

a primary DBMS which communicates with the primary connection manager to receive the transactions and executes the transactions on data stored in one or more data files (col. 3, ll. 60-63 and col. 5, ll. 12-30); and

a second computing system including:

a secondary connection manager (col. 3, ll. 60-63 and col. 5, ll. 12-30), and

a secondary DBMS which communicates with the secondary connection manager and can access data stored in the one or more data files (col. 3, ll. 60-63 and col. 5, ll. 12-30),

wherein the secondary connection manager is configured to monitor a performance of the first computing system and the primary connection manager is configured to monitor a performance of the second computing system (col. 3, line 65 – col. 4, line 4),

and wherein when the secondary connections manager determines that an unbalanced workload exists between the first and the second computing systems, the secondary connection manager transparently assumes the TCP/IP

connection, replays incomplete portions of open transactions on the data through the secondary DBMS, and begins to receive additional transactions from the at least one client to be executed against the one or more data files (col. 4, ll. 9-22).

7. Regarding claim 5, Song discloses the highly available database cluster wherein the primary connection manager and the secondary connection manager communicate with one another (col. 3, line 65 – col. 4, line 4).

8. Regarding claim 6, Song discloses the highly available database cluster wherein the primary connection manager transmits copies to the secondary connection manager of data packets which include the transactions and responses or acknowledgements to the transactions (col. 3, ll. 60-63 and col. 5, ll. 12-30).

9. Regarding claim 7, Song discloses the highly available database cluster wherein the primary connection manager and the secondary connection manager exchange statistics in order to monitor the TCP/IP connection (col. 3, line 65 – col. 4, line 4).

10. Regarding claim 8, Song discloses the highly available database cluster wherein the statistics include the number of clients connected to the primary connection manager (col. 4, ll. 5-19).

11. Regarding claim 9, Song discloses the highly available database cluster wherein the statistics include the number of clients the secondary connection manager can see connected to the primary connection manager (col. 4, ll. 5-19).

12. Regarding claim 10, Song discloses the highly available database cluster wherein the statistics include whether the secondary connection manager can communicate with the primary connection manager (col. 4, lines 5-19).

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13. Claim 11 contains similar subject matter and is rejected under the same rationale as independent claim 1 above.

14. Regarding claim 12, Song discloses the primary and at least one secondary connection manager wherein the protocol native to the two or more DBMSs comprises SQL*Net (col. 3, ll. 49-59).

15. Regarding claim 13, Song discloses the primary and at least one secondary connection manager wherein the at least one process further comprises:

an import process configured to retrieve the statements from the primary connection and store those statements associated with open transactions (col. 4, lines 5-19); and

a replay process configured to access the stored statements and to forward the stored statements to the secondary protocol shadow (col. 4, lines 5-19).

16. Regarding claim 14, Song discloses the primary and at least one secondary connection manager wherein the secondary protocol shadow is configured to access a log file of the primary DBMS to ensure against replaying of statements of closed transactions (col. 4, lines 5-19).

17. Claim 15 contains similar subject matter and is rejected under the same rationale as claim 5.

18. Claim 16 contains similar subject matter and is rejected under the same rationale as claim 7.

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19. Claim 20 contains similar subject matter and is rejected under the same rationale as claim 1.

20. Claim 21 contains similar subject matter and is rejected under the same rationale as claim 1.

21. Claim 24 contains similar subject matter and is rejected under the same rationale as claim 1.

22. Regarding claim 25, Song discloses the database cluster wherein the second connection manager is configured to transparently assume the TCP/IP connection with the client computer when the second connection manager detects a failure of the TCP/IP connection between the first connection manager and the client computer (col. 4, ll. 9-22).

23. Regarding claim 26, Song discloses the database cluster wherein the second connection manager is configured to transparently assume the TCP/IP connection with the client computer when the second connection manager detects a failure of the first DBMS (col. 4, ll. 9-22).

24. Regarding claim 27, Song discloses the database cluster wherein the second connection manager is configured to transparently assume the TCP/IP connection with the client computer when the second connection manager detects an unbalanced workload of the first DBMS (col. 4, ll. 9-22).

Conclusion

25. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hvasshovd (US 5,423,037) discloses a continuously available database server having multiple groups of nodes, each group maintaining a database copy with fragments stored on multiple nodes.

Bhide et al. (US 5,675,791) disclose a method and system for database load balancing.

Bhide et al. (US 5,440,727) disclose asynchronous replica management in shared nothing architectures.

Bhide et al. (US 5,625,811) disclose a method and system for database load balancing.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin A. Ailes whose telephone number is (571)272-3899. The examiner can normally be reached on M-F 6:30-4, IFP Work Schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571)272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

baa

Beatriz Prieto
BEATRIZ PRIETO
PRIMARY EXAMINER